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OPTIMIZING WARTIME MATERIEL DELIVERY:
AN OVERVIEW OF DOD CONTAINERIZATION

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VOLUME II
FRAMEWORK FOR ACTION TO ADDRESS
DOD CONTAINERIZATION ISSUES

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October 1988
Final Report

EXEMPTION STATEMENT A

Approved for public release
Distribution Unlimited

Prepared for

U.S. Department of Defense
Organization of the Joint Chiefs of Staff
Logistics Directorate (J-4)
Washington, DC 20301

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1.0 INTRODUCTION

This second volume of the study entitled, Optimizing Wartime Materiel Delivery: An Overview of DOD Containerization Efforts, outlines a framework for action to address containerization issues identified in Volume I. The study was conducted by the Transportation Systems Center (TSC) of the U.S. Department of Transportation for the Organization of the Joint Chiefs of Staff (OJCS, J-4). The objectives of the study include:

1. Provide documentation of DOD containerization programs to serve as a reference for past and current efforts and identify issues around the use of containers in wartime. Only standard commercial containerization conforming to ISO standards is considered. Volume III of this study is an annotated bibliography developed to support this objective.
2. Highlight unresolved issues by indicating those areas where the integration of containers has not been achieved or where the impacts of containerization have not been fully evaluated. Volume I of this study addresses the findings of objectives 1 and 2.
3. Develop a framework for action to resolve issues. The framework emphasizes a centralized approach to key system-wide issues through high level management, coordination and visibility within and among DOD elements.

Based upon analysis of the findings of 2, above, this volume outlines actions to assist in resolving the issues. The documentation of container efforts presented in Volume I is largely organized around cargo-specific issues because containerization system development was conducted on this basis. However, this volume is organized according to functional requirements for a container oriented distribution system, as described in Volume I, Section 2.0, and as used to summarize issues in Volume I, Section 12.0. The focus is on actions for issue resolution. The reader is referred to Volume I for a full discussion of the issues.

The framework for action covers a number of activities in a wide range of areas. While issue resolution will necessitate the dedication of time, labor

and funding, specific resource estimates to accomplish these activities are beyond the scope of this effort. These will vary among the recommended actions and among DOD elements with responsibilities in an issue area.

Some of the recommended actions are currently underway to varying degrees. Examples are the Container Requirements and Availability Study (CRAS), the development of Army container policies, the development of Marine Corps container policy and doctrine, and activities to integrate commercial containers into the Containerized Ammunition Distribution System (CADS).

The framework for action consists of:

- (1) Recommended actions to resolve issues, organized by functional requirement.
- (2) General sequencing of activities. Ideally, some actions should be done sequentially because information from one benefits the next. Other actions can begin simultaneously.
- (3) Recommended responsible DOD element(s) for the action. For some actions, one DOD element should have primary or singular responsibility. For others, responsibility by several elements is required.
- (4) A four-level priority scheme for the recommended actions. Priority rating 1 is reserved for an action essential to the development of a coherent DOD-wide container distribution system and should be undertaken as soon as sequencing allows. Priority 2 indicates information or activities that support and enhance priority 1 actions. Priority 3 indicates an action required for implementing container delivery subsystems, and a priority 4 action provides additional information for fine-tuning the system.

2.0 RECOMMENDED ACTIONS

The following sections contain the recommended actions for resolving the issues identified in Volume I. Although each is presented in a discrete functional area, the action usually cannot be addressed without considering other areas. Also, "chicken and egg" dilemmas will occur for which issue resolution will be an iterative process. For each issue, a rationale and one or more recommended actions are included.

2.1 Container Policy and Doctrine

ISSUE: Gaps exist in written Service container policies, reflecting and reinforcing existing weaknesses in the container distribution system. Therefore, systematic implementation of DODD 4500.37 has not occurred fully. Rather, container and tactical shelter programs have been developed within the guidelines of DODD 4500.37 to meet specific requirements.

RATIONALE: Systematic incorporation of containerization into the distribution system requires an explicit statement of goals and means to achieve them. Without this guidance, fragmented and even conflicting subsystems can exist.

2.1.1 ACTION 1: DEVELOP COMPREHENSIVE WRITTEN SERVICE CONTAINER POLICIES

Service-wide container policies will provide the guidance to ensure an integrated wartime container distribution system. Development of Army container policy is particularly critical due to large volumes that potentially impact the entire delivery system. The containerization of unit equipment must be addressed. Specialized subsystem policies, e.g., Air Force/MAC policy on containerizing for airlift, should also be developed and, if required, coordinated among the Services. Container policies to provide Service-wide guidance should address these topics:

1. The goal of the system, e.g., to use containerization to deliver materiel in good condition where and when it is needed;

2. Objectives for reaching the goal, e.g., specified containerization levels at links and nodes of the system;
3. Impacts of containerization on deployment, supply and transportation systems.
4. Uses of types and sizes of containers;
5. Specialized subsystems required due to operational considerations or commodity characteristics, especially LOTS, CADS, and air movement system;
6. Non-transportation uses of containers;
7. Use of commercial versus organic containers;
8. Use of host nation and civilian organizations for container movement and handling;
9. Measures of effectiveness, e.g., productivity, cost, speed, equipment utilization;
10. Exceptions to the concept/policy; and
11. Responsible organizations for implementing the policy.

Containerization policies may vary greatly depending upon the deployment scenario. Size of deployment, intensity of conflict and operational environments are key variables. For example, containerization of unit equipment may not be necessary for a small deployment such as Grenada but it is likely to be essential for some units in executing a full scale OPLAN. Army policy should, in TSC's view, require at least some major units to be prepared to containerize unit equipment at home installations. Such policies, which need not wait for detailed systems modeling, would direct unit and installation commanders toward increasing their container outloading capability.

Priority: 1

Responsibility: Services

Sequence: Key features can be put in place now. Results of action 2, below, will provide additional critical information.

2.1.2 ACTION 2: ESTIMATE SYSTEM-WIDE IMPACTS OF ALTERNATIVE SERVICE CONTAINER POLICIES AND DEVELOP A MODELING CAPABILITY FOR CONTINUING POLICY EVALUATION

The analysis of system-wide impacts for differing levels of container use for various deployment scenarios is the critical starting point for refining Service container policies within the framework of DODD 4500.37. As the deployment increases in size, dependence upon containerization will be greater due to the limited number of "militarily useful" roll-on/roll-off and breakbulk ships. In these deployment cases, the need to address and assess the impact of containerization of unit equipment becomes especially critical.

A systematic tool or model is necessary to assess trade-offs between policy options, system constraints and the ability to meet the deployment and sustainment requirements of different plans. Use of the tool can highlight particular program requirements, such as the specific needs for numbers of container-capable terminal units. In other words, a model would provide input to programmatic initiatives to improve system handling capabilities and alleviate constraints.

The following should be undertaken as part of this effort:

1. Estimate system-wide impacts of container use at a level of detail to identify specific throughput problems,
2. Identify requirements that must be satisfied,
3. Estimate current system capacity for handling containers,

4. Identify long- and short-term distribution system constraints,
5. Determine alternative solutions to alleviate constraints, and
6. Conduct sensitivity analysis around scenarios of container use.

Four broad steps are recommended for developing the systems analysis capability. First, complete a requirements statement, functional description, and cost estimate for the model. Next, identify and evaluate existing models which may provide parts of the capability. Several such systems were identified during the course of this study and are discussed in Volume I. They provide a starting point and include: USCENTCOM's Cargo Containerization System (CCS), MTMC/TEA's TARGET (Transportability Reports Generator) model, the Air Container Requirements Model developed by TSC, Automated Installation Outload and Receiving Reports (DD Form 1726) under development by MTMC/TEA, inter-theater models such as MIDAS and RAPIDSIM, and CAA/DCSLOG's Containerized Cargo Distribution Analysis (COCADA) which uses a version of the intra-theater SITAP model. Also, the Container Requirements and Availability Study, currently being undertaken by MTMC, will address container requirements based upon scenarios of container use. Through this effort, parts of an automated capability to permit analysis of container use/policy may be developed. Third, compare existing system capabilities to the functional requirements to identify gaps in current capabilities to describe the distribution system. Finally, the systems development should be specified in detail and carried out.

Priority: 2

Responsibility: USTRANSCOM with Service input on alternative policy scenarios

Sequence: Can begin immediately

2.1.3 ACTION 3: REVISE SERVICE DOCTRINE TO REFLECT CONTAINER POLICY

Following the development of container policies, Service doctrine may require revision to describe new activities and procedures of container distribution related to the items listed in action 1, above. Information disseminated

through, for example, field manuals and training, should be examined thoroughly to ensure that it comprehensively reflects the policies. The Army in the Field Container System Study, which analyzed the impact of containerizing Army resupply, serves as an example of evaluating the impacts of new policy and revising doctrine.

Priority: 1

Responsibility: Services

Sequence: Completion of action 1 required

2.2 Container Requirements

ISSUE: The number of containers, by type, use and source, required to implement a wartime containerized distribution system is not known.

RATIONALE: Knowledge of the container requirement is essential to ensuring that the system can be implemented as planned. The magnitude of the container movement requirement and the capability to move the containers must be balanced, avoiding or minimizing shortfalls as well as excesses in capacities. Also, the adequacy of organic and commercial sector inventories cannot be determined without knowing the required number. Lack of knowledge on requirements precludes developing methods for eliminating shortfalls.

2.2.1 ACTION 4: DETERMINE THE NUMBER OF STANDARD AND SPECIAL CONTAINERS REQUIRED TO IMPLEMENT CONTAINER POLICIES

After development of Service policies based upon current capabilities and/or out-year goals, an estimate of requirements to implement the policy must be made. (Note: a container requirements modeling capability is part of the full system model described in action 2). Requirements for special containers should be addressed as well as time-phased, geographic requirements. As noted above, the current CRAS effort will estimate container requirements under various scenarios. Since Service policies are not all in place, results from the CRAS effort are expected to provide information helpful in further developing them. The process is expected to be iterative as policies, container requirements, system capabilities, delivery requirements, etc., are balanced.

Priority: 1

Responsibility: USTRANSCOM (MTMC) with input from the Services

Sequence: Requires input from action 1, or preliminary estimates can begin based upon current information

2.2.2 ACTION 5: ESTIMATE THE REQUIREMENTS FOR A NUCLEUS DOD-OWNED CONTAINER FLEET

Although DOD container policy stresses reliance on the commercial sector for the provision of containers, a nucleus DOD-owned fleet is required. Much of the current organic fleet is reaching the end of its useful life. The extent to which the container requirement will be met using the organic fleet should be planned and the fleet acquired.

Priority: 2

Responsibility: USTRANSCOM (MTMC) with input from the Services

Sequence: Input from actions 1 and 4 required, but preliminary estimates can be made based upon current information

2.2.3 ACTION 6: DETERMINE THE REQUIREMENT FOR COMMERCIALY-SUPPLIED CONTAINERS

The requirement for container capacity from commercial sources to augment the nucleus fleet should be estimated.

Priority: 1

Responsibility: USTRANSCOM (MTMC) with input from the Services

Sequence: Input from actions 1 and 4 required

2.2.4 ACTION 7: IDENTIFY COMMERCIAL SECTOR CONTAINER INVENTORIES

The current and estimated out-year size of commercial container fleets, by type, should be determined.

Priority: 2

Responsibility: USTRANSCOM (MTMC)

Sequence: Can begin immediately

2.2.5 ACTION 8: ESTIMATE EXPECTED CONTAINER AVAILABILITY

The availability of organic and commercial containers to meet the DOD requirement should be determined. Availability may not be adequate or evenly distributed throughout a scenario. Availability is sensitive to locations, cycle time, economic conditions, competing demands, attrition, container condition (for ammunition), and diversion to other field uses such as field storage of supplies. Civil container demands for critical commercial and military essential cargo, as well as demands by allies, will also compete with DOD's demand. MTMC plans to develop methods for estimating availability in the current CRAS effort.

The development of an automated method for estimating availability requires a functional description, identification and evaluation of existing capabilities, identification of gaps in existing capability, and system specification. During the course of this study, TSC identified no current capabilities for estimating container availability, although information on off-hire container locations and container condition were developed for PM AMMOLOG. This information may be used for developing preliminary planning factors, but the other variables listed above should also be considered.

Priority: 2

Responsibility: USTRANSCOM (MTMC)

Sequence: Can begin in conjunction with action 7

2.2.6 ACTION 9: DETERMINE EXPECTED CONTAINER SHORTFALLS

Shortfalls should be identified by comparing requirements with inventories and availability. Even if overall inventory/availability appears adequate, verification that requirements for certain types of special containers, to certain locations, and within required time-frames can be met.

Priority: 2

Responsibility: USTRANSCOM (MTMC)

Sequence: Requires completion of actions 1, 4 and 8

2.2.7 ACTION 10: IDENTIFY ALTERNATIVES TO ALLEVIATE CONTAINER SHORTFALLS

Shortfalls in specialized or general purpose container inventories and in container availability must be alleviated through acquisition, incentives for the commercial sector to maintain inventories, and/or modifications to policy. Specific alternatives should be developed and implemented.

Priority: 2

Responsibility: USTRANSCOM (MTMC), Services

Sequence: Identification can begin immediately but final input required from action 9 prior to implementation

2.2.8 ACTION 11: TRACK COMMERCIAL SECTOR INVENTORIES

Maintenance of information on commercial inventories will highlight trends in types, sizes and ownership of containers and, therefore, potential problems in obtaining appropriate containers for the DOD system.

Priority: 4

Responsibility: USTRANSCOM (MTMC)

Sequence: Can begin immediately

2.3 Container Acquisition

ISSUE: Beyond acquisition of containers through extension of peacetime Container Agreements, DOD has no mechanism in place to acquire containers in a emergency.

RATIONALE: DOD relies on the commercial sector for the provision of containers. Without an agreement with the commercial sector for augmenting the organic fleet rapidly, a container-oriented distribution system is jeopardized.

2.3.1 ACTION 12: ESTABLISH MECHANISMS FOR ACQUIRING COMMERCIAL CONTAINERS IN EMERGENCY SITUATIONS

Ideally, a written agreement with the commercial sector on the provision of containers would be developed in peacetime for invocation in wartime. The Code of Federal Regulations (Title 46, Part 340) implements the Defense Production Act and provides for the acquisition of transportation resources in time of national emergency. DOD and the Department of Transportation have considerable experience with voluntary agreements for the provision of assets, e.g., for aircraft (the CRAF program), ships, waterfront facilities, but the approach to container acquisition has been more ad hoc. Use of 46 CFR 340 and other alternatives should be evaluated, and an acquisition mechanism established.

Priority: 1

Responsibility: USTRANSCOM

Sequence: Can begin immediately

2.4 Force Structure, including Host Nation and Civilian Support

ISSUE: Due to the lack of complete container policies describing both expected container use (including container requirements estimates) and the planned use of organic, host nation and civil support, adequacy of the number and capabilities of support units to perform the container distribution for a set of scenarios has not been determined.

RATIONALE: Efficient container distribution cannot be achieved without properly trained and equipped personnel in the correct numbers at the right locations.

2.4.1 ACTION 13: ESTIMATE THE NUMBERS, TYPES AND SKILLS OF MILITARY SUPPORT UNITS FOR CONTAINER DISTRIBUTION FOR A SET OF SCENARIOS

The requirement for military units to move containers in accordance with container policy must be compared to the existing and planned capabilities. If force structure planning factors are lacking, they should be developed.

Priority: 1

Responsibility: Services, CINCs

Sequence: Input required from actions 1, 2 and 4. Begin in conjunction with action 14.

2.4.2 ACTION 14: BASED UPON SCENARIO-SPECIFIC CONTAINER POLICIES, ESTIMATE THE REQUIREMENT FOR, AND THE AVAILABILITY OF, HOST NATION AND CIVIL SUPPORT FOR CONTAINER HANDLING AND THROUGHPUT

Container handling and movement will require the use of host nation and civilian support in addition to that supplied by military units. The extent of this reliance should be determined.

Priority: 1

Responsibility: Services, CINCs

Sequence: Input required from actions 1, 2 and 4. Begin in conjunction with action 13.

2.4.3 ACTION 15: ESTIMATE WHETHER SHORTFALLS IN MILITARY, CIVIL AND HOST NATION SUPPORT EXIST

Container handling capability provided by military, civil and host nation units must be compared to the container movement requirement to determine shortfalls.

Priority: 2

Responsibility: Services, CINCs

Sequence: Requires completion of actions 13 and 14

2.4.4 ACTION 16: IDENTIFY AND IMPLEMENT METHODS TO ELIMINATE CONTAINER HANDLING AND MOVEMENT SHORTFALLS INCLUDING INCREASED USE OF THE CIVIL SECTOR/HOST NATION SUPPORT AND THROUGH ADDITIONAL MILITARY UNITS, EQUIPMENT, AND TRAINING

Priority: 2

Responsibility: Services, CINCs

Sequence: Requires completion of action 15

2.5 Facility Readiness

ISSUE: The physical adequacy of transportation nodes, e.g., installations, ports, storage and transfer points, ammunition plants; to conduct wartime distribution using containers under various scenarios should be assessed.

RATIONALE: Specific physical conditions and equipment are required to efficiently handle containers.

2.4.1 ACTION 17: ASSESS THE ADEQUACY OF TRANSPORTATION SYSTEM NODES TO HANDLE WARTIME CONTAINER THROUGHPUT UNDER VARIOUS SCENARIOS

Origins, destinations, transfer and storage points must have adequate physical plants to handle the expected container throughput. Facility modernization may be required. Installation equipment to handle containers may be required.

Priority: 1

Responsibility: Services, CINCs, USTRANSCOM (MTMC and MAC)

Sequence: Estimates of current capabilities can be expanded now. Assessment of adequacy requires input from actions 1 and 4.

2.4.2 ACTION 18: DEVELOP AND IMPLEMENT A PLAN TO UPGRADE CONTAINER HANDLING CAPABILITIES AT SYSTEM NODES, AS REQUIRED

Priority: 2

Responsibility: Services, CINCs, USTRANSCOM (MTMC and MAC)

Sequence: Input required from action 17

2.6 Transition to Wartime Conditions

ISSUE: Peacetime distribution procedures differ from wartime ones, which will result in disruptions of cargo and equipment deliveries.

RATIONALE: Execution of an OPLAN is time-sensitive requiring transition of the distribution system with as few bottlenecks and hold-ups as possible. Ideally, the change in the distribution system from peace to war will be in volumes of cargo rather than method and pattern of delivery. This, however, will not be the case due to cost incentives in peacetime and operational incentives in wartime. Shifts in cargo distribution procedures will occur both within DOD and between DOD and the civil sector.

2.6.1 ACTION 19: DETERMINE TOTAL SYSTEM IMPACTS OF IMPLEMENTING WARTIME PROCEDURES IN PEACETIME

Comparison of peacetime and expected wartime procedures will highlight potential transition problems. Where the distribution procedures differ, feasibility and impact analyses of implementing wartime procedures should be undertaken. Particular care should be given to cost estimates to ensure that full system costs of alternatives are compared, not just selected segments.

Priority: 2

Responsibility: USTRANSCOM, Services, CINCs

Sequence: Can begin immediately

2.6.2 ACTION 20: IMPLEMENT AND/OR EXERCISE WARTIME DISTRIBUTION PROCEDURES

When feasible, wartime distribution procedures should be implemented in peacetime. If not feasible, explicit guidance on how to transition should be developed and disseminated, and regular exercises, such as container distribution by airlift and deployment of units in containers stuffed at installations, should occur.

Priority: 2

Responsibility: JCS, CINCs, USTRANCOM (TOAs), Services

Sequence: Begin after action 19 or start immediately based upon currently available information

2.7 Special Delivery Systems

ISSUE: The Containerized Ammunition Distribution System (CADS) and the Logistics Over the Shore (LOTS) and the Air Movement subsystems cannot be implemented yet according to concept.

RATIONALE: CADS, LOTS and the air movement of containers require special attention due to the nature of the commodity (CADS) and operational conditions (LOTS and air movement).

2.7.1 ACTION 21: ESTABLISH AMMUNITION CONTAINERIZATION POLICIES INCLUDING CONSIDERATION OF INCREASED ISO COMPATIBILITY FOR FIELD SYSTEMS SUCH AS PLS

Service container policies developed under action 1 should address the CADS subsystem. Specifically, topics listed under that action should be addressed for ammunition as well as for general cargo. Also, ISO compatibility for PLS would permit both CONUS source to overseas user movements without rehandling and flexibility in forward areas. Given the overall goal of optimizing the throughput of materiel in a container-dominated environment, it is worth high level review and consideration to include ISO compatibility in the PLS program.

Priority: 3

Responsibility: Services

Sequence: Begin in conjunction with action 1

2.7.2 ACTION 22: INTEGRATE COMMERCIAL CONTAINERS INTO CADS

The concept for CADS has always assumed commercial containers would augment the organic fleet. Currently, shipments in commercial containers are not made regularly, although PM AMMOLOG currently is working to introduce commercial containers for specific items. Experience with other-than-MILVAN restraint systems and with handling specialized containers using various equipment will result. Experience with such equipment and with acquisition procedures would ease transition to wartime.

Priority: 3

Responsibility: Army (single manager for common-user conventional ammunition) and other Services, USTRANSCOM (MTMC and MSC)

Sequence: Can begin immediately

2.7.3 ACTION 23: WORK WITH THE COAST GUARD AND INDUSTRY TO DETERMINE IF THE CONDITION STANDARD FOR AMMUNITION CONTAINERS CAN BE RELAXED

The Coast Guard condition standard for ammunition containers is currently more stringent than industry standards for a container considered safe for carrying any commodity, including munitions. Based upon a sampling of off-hire 20-foot standard containers for PM AMMOLOG, 50 percent of the containers would not meet current Coast Guard requirements. DOD should investigate with the Coast Guard whether the standard can be relaxed, based upon industry information/testing of repaired containers.

Priority: 4

Responsibility: Army

Sequence: Can begin immediately

2.7.4 ACTION 24: DETERMINE THE REQUIREMENT FOR A NUCLEUS, DOD-OWNED AMMUNITION CONTAINER FLEET

The requirement for common-user, DOD-owned ammunition containers should be established. Ammunition MILVANS are nearing the end of their useful lives. Because this fleet is dedicated due to the installation of the restraint bar system, estimating the size of this nucleus fleet is an extension of estimating the general requirement for the organic container fleet, per action 5.

Priority: 3

Responsibility: Army and other Services

Sequence: Begin in conjunction with action 5

2.7.5 ACTION 25: ESTABLISH A WEST COAST AMMUNITION CONTAINER FACILITY

Previously, the requirement for a West Coast containerized ammunition capability has been confirmed, but no action has been taken. The issue appears to be funding, not conflicting judgements about the requirement. The project for the previously planned capacity should begin, although additional requirements may be identified based upon comprehensive container policies.

Priority: 3

Responsibility: Navy

Sequence: Can begin immediately

2.7.6 ACTION 26: CONDUCT REGULAR LOTS EXERCISES TO ASSESS AND IMPROVE THE CAPABILITY TO TRANSFER, MARSHAL, RETROGRADE AND MANAGE CONTAINERS

LOTS throughput goals have not been met. There has been neither a full assessment of the Services' LOTS capability nor an exercise to assess new systems, e.g., COTS, ELCAS. Also, transition from a Marine Corps AFOE operation to that of Army LOTS should be attempted to assess recent revisions and refinements in LOTS doctrine. Moreover, there have been discussions about conducting LOTS operations in Sea State 3 conditions during a contingency, but offloading and backloading containers in such conditions have not been attempted.

Priority: 3

Responsibility: JCS, Services, CINCs

Sequence: Can begin immediately

2.7.7 ACTION 27: DETERMINE THE OPTIMAL LEVEL OF CONTAINERIZATION FOR AIRLIFT

Trade-offs in the airlift system should be evaluated to determine the optimal level of containerization. Throughput capacities of APOEs and APODs, aircraft types (military and civil), and impacts on theater handling must be considered.

Priority: 3

Responsibility: USTRANSCOM (MAC)

Sequence: Can begin immediately

2.7.8 ACTION 28: TRACK TACTICAL SHELTERS AND CONTAINERS USED AS UNIT EQUIPMENT

Tracking of tactical shelter inventories is critical to ensuring that airlift requirements can be met. Because tactical shelters and some containers are considered unit equipment, they are not as visible as containers used as a transportation envelope, and their movement requirements can be obscured. Even if no cargo is containerized for airlift, the tactical shelters and unit equipment containers may present a substantial container airlift requirement for which MAC must be prepared.

Priority: 3

Responsibility: USTRANSCOM (MTMC) with Service input

Sequence: Can begin immediately

2.7.9 ACTION 29: VALIDATE THE CONTAINER AIRLIFT REQUIREMENT BASED UPON SERVICE POLICIES

The requirement for container airlift was estimated in 1986 for OASD. Inventories of tactical shelters requiring airlift for the DG-92 scenario were identified and estimates of containerized cargo were made. After Service policies are developed, validation of these estimates can be made.

Priority: 4

Responsibility: USTRANSCOM (MAC)

Sequence: Begin after completion of actions 1, 4, and 28

2.7.10 ACTION 30: ASSESS AND UPGRADE, AS REQUIRED, THE CAPABILITY TO HANDLE CONTAINERS AND SHELTERS AT APOEs AND APODs

The ability to handle the minimum container airlift requirement, i.e., tactical shelters and containers used as unit equipment, should be assessed. MHE and CHE requirements should be determined.

Priority: 3

Responsibility: USTRANSCOM (MAC)

Sequence: Can begin in conjunction with actions 17 and 18. Input from action 27 and 28 required.

2.8 Integration of Container System Implementation and the Deliberate Planning Process

ISSUE: In the deliberate planning process, lack of comprehensive container policies for deployment scenarios results in cargo designation for containerization which does not necessarily reflect optimal use of system capabilities.

RATIONALE: The ability to implement planned containerized distribution must be reflected in OPLANs and in TOAs' scheduling models or execution of the OPLAN could result in system excess or shortfalls.

2.8.1 ACTION 31: EXAMINE JOBS FOR CONSISTENCY OF CARGO DESIGNATION FOR CONTAINERIZATION WITH CONTAINER POLICIES

The deliberate planning process should reflect implementation of policies for container use. These policies should be based upon system-wide requirements and constraints, as described in actions 1 and 2. Then, expected container use should be reflected in cargo designations by the CINCs. However, reflection of container policies in the planning process will probably require phase-in as capabilities are enhanced.

Priority: 1

Responsibility: JCS with Service input

Sequence: Begin after completion of actions 1, 16, 18, 27, 30

2.8.2 ACTION 32: EXAMINE AND REVISE TOAs' MODELS FOR CONSISTENCY WITH CONTAINER POLICIES

Assumptions used by MAC, MTMC and MSC for scheduling movements should reflect implementation of container policy.

Priority: 2

Responsibility: USTRANSCOM (TOAs)

Sequence: Begin after completion of actions 1, 16, 18, 27, 30

2.9 System Visibility and ~~Flow~~ Control

ISSUE: A common-user system ~~for~~ visibility and control of container distribution has not been ~~de~~veloped. Existing TOA, Service, and industry systems are fragmented and ~~in~~complete.

RATIONALE: A system for ~~container~~ management and visibility will provide flexibility to respond ~~immediately~~ to user needs by facilitating priority allocations and diversions, ~~ensure~~ that containers move expeditiously and are accounted for on forward and ~~retrograde~~ moves, minimize the risk of container congestion and/or scarcity ~~and~~ provide information on carrier and system performance. These will be ~~essential~~ for wartime distributions.

2.9.1 ACTION 33: DEVELOP ~~AN~~ AUTOMATED SYSTEM FOR MAINTAINING THE VISIBILITY AND MANAGEMENT OF THE ~~CONTAINER~~ DISTRIBUTION SYSTEM

An automated common-user ~~container~~ management and tracking system should be developed. Other DOD efforts ~~under~~ development for specific applications should be examined to avoid ~~duplication~~ and to ensure inter-system compatibility. Any mission-~~specific~~ requirements not served by a common-user system should be identified. ~~Duplication~~ of carrier tracking systems should also be avoided. Any development should facilitate linking container identity with information on the ~~contacts~~ and should maximize the use of existing capabilities such as linkage ~~with~~ commercial carrier systems and other DOD systems.

Priority: 1

Responsibility: USTRANSCOM (~~CMC~~)

Sequence: Can begin ~~immediately~~

2.9.2 ACTION 34: DEVELOP A SYSTEM FOR TRACKING OWNERSHIP AND LOCATION OF DOD-OWNED CONTAINERS AND TACTICAL SHELTERS

As container system development has progressed in a compartmentalized fashion, ownership and location of DOD-owned inventories have not been tracked comprehensively or in a timely manner. Knowledge of the peacetime locations will be critical in case of emergency as these may be the first available inventories. Also, as noted in recommendation 28, tracking of containers and shelters used as unit equipment is essential for determining the container airlift requirement.

As of January 1987, all ISO containers were required by 49 CFR 450-453 to be registered. DOD-owned containers and shelters are registered with MTMC's Joint Container Control Office. A review of the inventory suggests that all containers are not registered, e.g., no Army or Air Force tactical shelters are included. The Federal requirement to register DOD-owned ISO shelters and containers should be enforced.

Priority: 4

Responsibility: USTRANSCOM (MTMC) with Service input

Sequence: Can begin immediately

2.10 Intra- and Inter-Service Coordination

ISSUE: Container system development and information sharing does not always occur at a single point within organizations at a level to afford visibility and coordination.

RATIONALE: Intra-Service coordination and communication is required to ensure that a coherent logistics system develops, rather than a fragmented one. Also, coordination and communication between Services enhances information flow that avoids duplication of effort, time and resource savings and issue resolution when the policies and procedures of one Service impact another.

2.10.1 ACTION 35: DESIGNATE CONTAINERIZATION POINTS OF CONTACT FOR EACH SERVICE AND TOA

The oversight required to develop a coherent logistics system implies high level, centralized management stressing issue-oriented coordination and communication to assess progress and priorities. Single points of contact should be designated to provide the oversight and coordination, with responsibilities of the position explicit in the written policy.

Priority: 1

Responsibility: Services, USTRANSCOM (TOAs), JCS

Sequence: Can begin immediately

2.10.2 ACTION 36: ESTABLISH AN ACTION GROUP TO COORDINATE, INTEGRATE, ENHANCE, AND ADVOCATE CONTAINER PROGRAMS WITHIN DOD

A Joint Containerization Action Group should provide a focal point for action and a forum for the interchange of information, requirements, data and standards among DOD elements with interests in the development, procurement, and utilization of ISO containers and supporting hardware/systems. Membership should include the Services, USTRANSCOM, TOAs, DLA, CINCs, OJCS and OSD as well

as DOT elements (MARAD, Coast Guard). The Action Group and its roles and responsibilities should be included in DODD 4500.37.

Responsibilities would include:

1. To advocate a systems approach to container efforts and to coordinate studies and analyses necessary to achieve a seamless distribution system.
2. To annually brief the Defense Transportation Policy Council on DOD containerization efforts, particularly to emphasize open or unresolved issues or problems.
3. To coordinate the development of common-user container related systems, e.g., the development or augmentation of an existing container management system to maintain visibility and management of containers.
4. To provide a central point of contact for the interchange of information on issues and events affecting the optimal use of containers throughout DOD.
5. To establish a government/industry forum to discuss DOD requirements and issues and commercial sector events that impact DOD's container delivery system.
6. To maintain and disseminate information on the development and progress of container-related systems in DOD. This effort would include but go beyond equipment, as already compiled for the Services in the Container System Hardware Status Report.

Priority: 1

Responsibility: OSD, USTRANSCOM

Sequence: Can begin immediately

2.11 Commercial Trends and Technologies

ISSUE: There is no established forum for discussion between DOD and the commercial sector on container-related issues.

RATIONALE: DOD needs information exchange with the commercial sector on many issues including container inventories and availability, container and intermodal trends that impact the DOD distribution system, and advanced technologies in equipment and automated tracking.

2.11.1 ACTION 37: ESTABLISH A GOVERNMENT/INDUSTRY CONTAINERIZATION FORUM

As indicated under action 36, a government/industry Forum should be established under the auspices of a Joint Container Action Group. This would ensure high level visibility and coordination to discuss DOD requirements and issues as well as commercial sector events that impact DOD's implementation of a container delivery system. Container lessors, carriers, manufacturers and other commercial parties, as appropriate, should be included.

Priority: 4

Responsibility: USTRANSCOM

Sequence: Can begin immediately

3.0 SUMMARY OF RECOMMENDED ACTIONS

This section summarizes the actions recommended for addressing open container issues. As noted in the Introduction, the framework emphasizes a centralized approach to key system-wide issues through high-level management, coordination and visibility. The priority scheme reflects this emphasis. Table 3.1 summarizes responsible DOD elements for each action and visually emphasizes the requirement for coordination within each element and between/among the elements to achieve Service- and DOD-wide integration, as provided by actions 35 and 36. Table 3.2 lists the recommended actions by priority.

ACTION 1: DEVELOP COMPREHENSIVE WRITTEN SERVICE CONTAINER POLICIES

Priority: 1

Responsibility: Services

Sequence: Key features can be put in place now. Results of action 2, below, will provide additional critical information.

ACTION 2: ESTIMATE SYSTEM-WIDE IMPACTS OF ALTERNATIVE SERVICE CONTAINER POLICIES AND DEVELOP A MODELING CAPABILITY FOR CONTINUING POLICY EVALUATION

Priority: 2

Responsibility: USTRANSCOM with Service input on alternative policy scenarios.

Sequence: Can begin immediately

ACTION 3: REVISE SERVICE DOCTRINE TO REFLECT CONTAINER POLICY

Priority: 1

Responsibility: Services

Sequence: Completion of action 1 required

ACTION 4: DETERMINE THE NUMBER OF STANDARD AND SPECIAL CONTAINERS REQUIRED TO IMPLEMENT CONTAINER POLICIES

Priority: 1

Responsibility: USTRANSCOM (MTMC) with input from Services

Sequence: Requires input from action 1

ACTION 5: ESTIMATE THE REQUIREMENTS FOR A NUCLEUS DOD-OWNED CONTAINER FLEET

Priority: 2

Responsibility: USTRANSCOM (MTMC) with input from Services

Sequence: Input from actions 1 and 4 required, but preliminary estimates can be made based upon current information

ACTION 6: DETERMINE THE REQUIREMENT FOR COMMERCIALY-SUPPLIED CONTAINERS

Priority: 2

Responsibility: USTRANSCOM (MTMC) with input from the Services

Sequence: Input from actions 1 and 4 required

ACTION 7: IDENTIFY COMMERCIAL SECTOR CONTAINER INVENTORIES

Priority: 2

Responsibility: USTRANSCOM (MTMC)

Sequence: Can begin immediately

ACTION 8: ESTIMATE EXPECTED CONTAINER AVAILABILITY

Priority: 2

Responsibility: USTRANSCOM (MTMC)

Sequence: Can begin in conjunction with action 7

ACTION 9: DETERMINE EXPECTED CONTAINER SHORTFALLS

Priority: 2

Responsibility: USTRANSCOM (MTMC)

Sequence: Requires completion of actions 1, 4 and 8

ACTION 10: IDENTIFY ALTERNATIVES TO ALLEVIATE CONTAINER SHORTFALLS

Priority: 2

Responsibility: USTRANSCOM (MTMC), Services

Sequence: Identification can begin immediately but final input required from action 9 prior to implementation

ACTION 11: TRACK COMMERCIAL SECTOR INVENTORIES

Priority: 4

Responsibility: USTRANSCOM (MTMC)

Sequence: Can begin immediately

ACTION 12: ESTABLISH MECHANISMS FOR ACQUIRING COMMERCIAL CONTAINERS IN EMERGENCY SITUATIONS

Priority: 1

Responsibility: USTRANSCOM

Sequence: Can begin immediately

ACTION 13: ESTIMATE THE NUMBERS, TYPES AND SKILLS OF MILITARY SUPPORT UNITS FOR CONTAINER DISTRIBUTION FOR A SET OF SCENARIOS

Priority: 1

Responsibility: Services, CINCs

Sequence: Input required from actions 1, 2 and 4. Begin in conjunction with action 14.

ACTION 14: BASED UPON SCENARIO-SPECIFIC CONTAINER POLICIES, ESTIMATE THE REQUIREMENT FOR, AND THE AVAILABILITY OF, HOST NATION AND CIVIL SUPPORT FOR CONTAINER HANDLING AND THROUGHPUT

Priority: 1

Responsibility: Services, CINCs

Sequence: Input required from actions 1, 2 and 4. Begin in conjunction with action 13.

ACTION 15: ESTIMATE WHETHER SHORTFALLS IN MILITARY, CIVIL, AND HOST NATION SUPPORT EXIST

Priority: 2

Responsibility: Services, CINCs

Sequence: Requires completion of actions 13 and 14

ACTION 16: IDENTIFY AND IMPLEMENT METHODS TO ELIMINATE CONTAINER HANDLING AND MOVEMENT SHORTFALLS INCLUDING INCREASED USE OF THE CIVIL SECTOR/HOST NATION SUPPORT AND THROUGH ADDITIONAL MILITARY UNITS, EQUIPMENT, AND TRAINING

Priority: 2

Responsibility: Services, CINCs

Sequence: Requires completion of action 15

ACTION 17: ASSESS THE ADEQUACY OF TRANSPORTATION SYSTEM NODES TO HANDLE WARTIME CONTAINER THROUGHPUT UNDER VARIOUS SCENARIOS

Priority: 1

Responsibility: Services, CINCs, USTRANSCOM (MTMC and MAC)

Sequence: Estimates of capabilities can be expanded now. Assessment of adequacy requires input from actions 1 and 4.

ACTION 18: DEVELOP AND IMPLEMENT A PLAN TO UPGRADE CONTAINER HANDLING CAPABILITIES AT SYSTEM NODES, AS REQUIRED

Priority: 2

Responsibility: Services, CINCs, USTRANSCOM (MTMC and MAC)

Sequence: Input required from action 17

ACTION 19: DETERMINE TOTAL SYSTEM IMPACTS OF IMPLEMENTING WARTIME PROCEDURES IN PEACETIME

Priority: 2

Responsibility: USTRANSCOM, Services, CINCs

Sequence: Can begin immediately

ACTION 20: IMPLEMENT AND/OR EXERCISE WARTIME DISTRIBUTION PROCEDURES

Priority: 2

Responsibility: JCS, CINCs, USTRANSCOM (TOAs), Services

Sequence: Begin after action 19 or start immediately based upon currently available information

ACTION 21: ESTABLISH AMMUNITION CONTAINERIZATION POLICIES INCLUDING CONSIDERATION OF ISO COMPATIBILITY FOR FIELD SYSTEMS SUCH AS PLS

Priority: 3

Responsibility: Services

Sequence: Begin in conjunction with action 1

ACTION 22: INTEGRATE COMMERCIAL CONTAINERS INTO CADS

Priority: 3

Responsibility: Army (as single manager for common-user conventional ammunition) and other Services, USTRANSCOM (MTMC and MSC)

Sequence: Can begin immediately

ACTION 23: WORK WITH THE COAST GUARD AND INDUSTRY TO DETERMINE IF THE CONDITION STANDARD FOR AMMUNITION CONTAINERS CAN BE RELAXED

Priority: 4

Responsibility: Army

Sequence: Can begin immediately

ACTION 24: DETERMINE THE REQUIREMENT FOR A NUCLEUS, DOD-OWNED AMMUNITION CONTAINER FLEET

Priority: 3

Responsibility: Army and other Services

Sequence: Begin in conjunction with action 5

ACTION 25: ESTABLISH A WEST COAST AMMUNITION CONTAINER FACILITY

Priority: 3

Responsibility: Navy

Sequence: Can begin immediately

ACTION 26: CONDUCT REGULAR LOTS EXERCISES TO ASSESS AND IMPROVE THE CAPABILITY TO TRANSFER, MARSHAL, RETROGRADE AND MANAGE CONTAINERS

Priority: 3

Responsibility: JCS, Services, CINCs

Sequence: Can begin immediately

ACTION 27: DETERMINE THE OPTIMAL LEVEL OF CONTAINERIZATION FOR AIRLIFT

Priority: 3

Responsibility: USTRANSCOM (MAC)

Sequence: Can begin immediately

ACTION 28: TRACK TACTICAL SHELTERS AND CONTAINERS USED AS UNIT EQUIPMENT

Priority: 3

Responsibility: USTRANSCOM (MTMC) with Service input

Sequence: Can begin immediately

ACTION 29: VALIDATE THE CONTAINER AIRLIFT REQUIREMENT BASED UPON SERVICE POLICIES

Priority: 4

Responsibility: USTRANSCOM (MAC)

Sequence: Begin after completion of actions 1, 4, 28

ACTION 30: ASSESS AND UPGRADE, AS REQUIRED, THE CAPABILITY TO HANDLE CONTAINERS AND SHELTERS AT APOEs AND APODs

Priority: 3

Responsibility: USTRANSCOM (MAC)

Sequence: Can begin in conjunction with actions 17 and 18. Input from action 27 and 28 required

ACTION 31: EXAMINE JOBS FOR CONSISTENCY OF CARGO DESIGNATION FOR CONTAINERIZATION WITH CONTAINER POLICIES

Priority: 1

Responsibility: JCS with Service input

Sequence: Begin after completion of actions 1, 16, 18, 27, 30

ACTION 32: EXAMINE AND REVISE TOAs' MODELS FOR CONSISTENCY WITH CONTAINER POLICIES

Priority: 2

Responsibility: USTRANSCOM (TOAs)

Sequence: Begin after completion of actions 1, 16, 18, 27, 30

ACTION 33: DEVELOP AN AUTOMATED SYSTEM FOR MAINTAINING THE VISIBILITY AND MANAGEMENT OF THE CONTAINER DISTRIBUTION SYSTEM

Priority: 1

Responsibility: USTRANSCOM (MTMC)

Sequence: Can begin immediately

ACTION 34: DEVELOP A SYSTEM FOR TRACKING OWNERSHIP AND LOCATION OF DOD-OWNED CONTAINERS AND TACTICAL SHELTERS

Priority: 4

Responsibility: USTRANSCOM (MTMC) with Service input

Sequence: Can begin immediately

ACTION 35: DESIGNATE CONTAINERIZATION POINTS OF CONTACT FOR EACH SERVICE AND TOA

Priority: 1

Responsibility: Services, USTRANSCOM (TOAs), JCS

Sequence: Can begin immediately

ACTION 36: ESTABLISH AN ACTION GROUP TO COORDINATE, INTEGRATE, ENHANCE, AND ADVOCATE CONTAINER PROGRAMS WITHIN DOD

Priority: 1

Responsibility: OSD, USTRANSCOM

Sequence: Can begin immediately

ACTION 37: ESTABLISH A GOVERNMENT/INDUSTRY CONTAINERIZATION FORUM

Priority: 4

Responsibility: USTRANSCOM

Sequence: Can begin immediately

TABLE 3.1

SUMMARY OF RESPONSIBLE ELEMENTS FOR RECOMMENDED ACTIONS

<u>Action</u>	<u>Responsible Element</u>										
	<u>OSD</u>	<u>JCS</u>	<u>AR</u>	<u>NAVY</u>	<u>AF</u>	<u>MC</u>	<u>TRANS</u>	<u>CINC</u>	<u>MTMC</u>	<u>MAC</u>	<u>MSC</u>
1			X	X	X	X					
2			X	X	X	X	P				
3			X	X	X	X					
4			X	X	X	X	P		(P)		
5			X	X	X	X	P		(P)		
6			X	X	X	X	P		(P)		
7							X		(X)		
8							X		(X)		
9							X		(X)		
10			X	X	X	X	P		(P)		
11							X		(X)		
12							X				
13			X	X	X	X		X			
14			X	X	X	X		X			
15			X	X	X	X		X			
16			X	X	X	X		X			
17			X	X	X	X	X	X	X	X	
18			X	X	X	X	X	X	X	X	

P means primary responsibility among two or more elements

X means singular or equal responsibility

For some actions with USTRANSCOM involvement, a primary TOA is indicated in parentheses.

TABLE 3.1

SUMMARY OF RESPONSIBLE ELEMENTS FOR RECOMMENDED ACTIONS

Action	Responsible Element										
	<u>OSD</u>	<u>JCS</u>	<u>AR</u>	<u>NAVY</u>	<u>AF</u>	<u>MC</u>	<u>TRANS</u>	<u>CINC</u>	<u>MTMC</u>	<u>MAC</u>	<u>MSC</u>
19			X	X	X	X	X	X			
20		X	X	X	X	X	X	X	X	X	X
21			X	X	X	X					
22			P	X	X	X	X		X	X	X
23			X								
24			P	X	X	X					
25				X							
26		X	X	X	X	X		X			
27							X			(X)	
28			X	X	X	X	P		(P)		
29							X			(X)	
30							X			(X)	
31		P	X	X	X	X					
32							X		(X)	(X)	(X)
33							X		(X)		
34			X	X	X	X	P		(P)		
35		X	X	X	X	X	X		X	X	X
36	X						P				
37							X				

P means primary responsibility among two or more elements

X means singular or equal responsibility

For some actions with USTRANSCOM involvement, a primary TOA is indicated in parentheses.

TABLE 3.2

SUMMARY OF RECOMMENDED ACTIONS, BY PRIORITY

PRIORITY 1: ESSENTIAL TO THE DEVELOPMENT OF A SYSTEM-WIDE CONTAINER DISTRIBUTION SYSTEM

Action 1: Develop Comprehensive Written Service Container Policies

Action 3: Revise Service Doctrine to Reflect Container Policy

Action 4: Determine the Number of Standard and Special Containers Required to Implement Container Policies

Action 12: Establish Mechanisms for Acquiring Commercial Containers in Emergency Situations

Action 13: Estimate the Numbers, Types and Skills of Military Support Units for Container Distribution for a Set of Scenarios

Action 14: Based upon Scenario-Specific Container Policies, Estimate the Requirement for, and the Availability of, Host Nation and Civil Support For Container Handling and Throughput

Action 17: Assess the Adequacy of Transportation System Nodes to Handle Wartime Container Throughput under Various Scenarios

Action 31: Examine JOPS for Consistency of Cargo Designation for Containerization with Container Policies

Action 33: Develop an Automated System for Maintaining the Visibility and Management of the Container Distribution System

Action 35: Designate Containerization Points of Contact for Each Service and TOA

Action 36: Establish an Action Group to Coordinate, Integrate, Enhance, and Advocate Container Programs within DOD

TABLE 3.2

SUMMARY OF RECOMMENDED ACTIONS, BY PRIORITY

PRIORITY 2: SUPPORTS AND ENHANCES PRIORITY 1 ACTIONS

Action 2: Estimate System-wide Impacts of Alternative Service Container Policies and Develop a Modeling Capability for Continuing Policy Evaluation

Action 5: Estimate the Requirements for a Nucleus DOD-Owned Container Fleet

Action 6: Determine the Requirement for Commercially-Supplied Containers

Action 7: Identify Commercial Sector Container Inventories

Action 8: Estimate Expected Container Availability

Action 9: Determine Expected Container Shortfalls

Action 10: Identify Alternatives to Alleviate Container Shortfalls

Action 15: Estimate Whether Shortfalls in Military, Civil and Host Nation Support Exist

Action 16: Identify and Implement Methods to Eliminate Container Handling and Movement Shortfalls including Increased Use of the Civil Sector/Host Nation Support and through Additional Military Units, Equipment, and Training

Action 18: Develop and Implement a Plan to Upgrade Container Handling Capabilities at System Nodes, as Required

Action 19: Determine Total System Impacts of Implementing Wartime Procedures in Peacetime

Action 20: Implement and/or Exercise Wartime Distribution Procedures

Action 32: Examine and Revise TOAs' Models for Consistency with Container Policies

TABLE 3.2

SUMMARY OF RECOMMENDED ACTIONS, BY PRIORITY

PRIORITY 3: REQUIRED FOR IMPLEMENTING CONTAINER DELIVERY SUBSYSTEMS

Action 21: Establish Ammunition Containerization Policies including Consideration of Increased ISO Compatibility for Field Systems such as PLS

Action 22: Integrate Commercial Containers into CADS

Action 24: Determine the Requirement for a Nucleus, DOD-Owned Ammunition Container Fleet

Action 25: Establish a West Coast Ammunition Container Facility

Action 26: Conduct Regular LOTS Exercises to Assess and Improve the Capability to Transfer, Marshal, Retrograde and Manage Containers

Action 27: Determine the Optimal Level of Containerization for Airlift

Action 28: Track Tactical Shelters and Containers Used as Unit Equipment

Action 30: Assess and Upgrade, as Required, the Capability to Handle Containers and Shelters at APOEs AND APODs

TABLE 3.2

SUMMARY OF RECOMMENDED ACTIONS, BY PRIORITY

PRIORITY 4: PROVIDES ADDITIONAL INFORMATION FOR FINE-TUNING THE SYSTEM

Action 11: Track Commercial Sector Inventories

Action 23: Work with the Coast Guard and Industry to Determine if the Condition Standard for Ammunition Containers can be Relaxed

Action 29: Validate the Container Airlift Requirement Based upon Service Policies

Action 34: Develop a System for Tracking Ownership and Location of DOD-Owned Containers and Tactical Shelters

Action 37: Establish a Government/Industry Containerization Forum